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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,897	01/29/2004	Chih-Yung Chen	4425-343	2606

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EXAMINER

MASDON, DAVID T

ART UNIT

PAPER NUMBER

2188

DATE MAILED: 04/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/765,897	Applicant(s) CHEN ET AL.	
	Examiner David Masdon	Art Unit 2188	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to because the elements in the drawings need to be labeled. (example: Fig. 2a and Fig. 2b) Only numbering the drawings is not sufficient. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

2. The disclosure is objected to because of the following informalities: 'cycles' needs to be replaced with 'cycle', when referring to a "second time cycles" or a "first time cycles".

Appropriate correction is required.

***Claim Objections***

3. Claims 1-4, 8-11 and 15-19 objected to because of the following informalities:

As per claims 2, 9 and 17, the word 'is' needs to be replaced with 'are'.

As per claim 16, 'access' needs to be replaced with 'accessing'.

As per claims 1-4, 8-11 and 15-19, the word 'cycles' needs to be replaced with 'cycle'. It is unclear by what applicant means by "second time cycles" or "first time cycles". For examination purposes, examiner will assume applicant is using a "second time cycle" or a "first time cycle".

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 2, 4, 9, 11, 16, 17 and 18 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. The term "much" in claims 2, 9, and 17 is a relative term which renders the claims indefinite. The term "much" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The length of the first time cycle disclosed in claims 2, 9 and 17 is rendered indefinite because of the term "much".

7. The term "substantial" in claims 4, 11 and 18 is a relative term which renders the claims indefinite. The term "substantial " is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The time of duration disclosed in claims 4, 11 and 18 is rendered indefinite because of the term "substantial".

8. The term "substantial" in claim 16 is a relative term which renders the claims indefinite. The term "substantial " is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The second time cycle disclosed in claim 16 is rendered indefinite because of the term "substantial".

9. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949).

In the present instance, claims 4 and 11 recite the broad recitation "duration between suspending and reviving the first time cycles is substantial a time when the second time cycles is finished", and the claims also recite "that is to say when the external memory unit finishes a current task" which is the narrower statement of the range/limitation.

### ***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1-3, 5-6, 8-10, 12-13, 15, 17, 19 rejected under 35 U.S.C. 102(b) as being anticipated by Guttag et al (US 5,493,646).

With regard to claim 1, Guttag et al discloses a data access apparatus comprising:

an external memory unit for storing data, [(external memory) column 6, lines 40-45]  
wherein the external memory unit has a second time cycles for performing a task;  
and [(memory cycle) column 11, lines 9-12]

a control unit couples with the external memory unit via a memory bus, comprising:  
[(data controller) column 6, line 40]

a microprocessor unit, having a first time cycles to perform a microprocessor  
operating; and [(data processor) column 6, line 43]

It is inherent that a processor is driven by some type of clock cycle to perform operations. Therefore, the data processor disclosed in Guttag et al, inherently discloses an operating cycle.

a memory interface control unit for directing accessing data toward to a data address of the external memory unit, wherein the microprocessor unit could access data from the external memory via the memory interface control unit; [(memory interface with address space) column 6, lines 43-46]

wherein the external memory unit has a data segment storing a flow control parameters and numerical arithmetic of the microprocessor operating. [(memory section for parameters) column 10, lines 30-35]

With regard to claim 2, Gutttag et al discloses the data access apparatus according to claim 1, wherein the first time cycles is much longer than the second time cycles. [(4x and 8x cycles) column 77, line 17 – column 78, line 65; specifically column 78, lines 50-51]

With regard to claim 3, Gutttag et al discloses the data access apparatus according to claim 1, wherein when the microprocessor is going to access data from the data segment of the external memory unit, sending a access request signal [(requests access) column 11, line 19] and suspending the first time cycles until receiving an acknowledge signal [(grants access) column 11, line 27], then reviving the first time cycles immediately [(permitting data access) column 11, line 30].

With regard to claim 5, Gutttag et al discloses the data access apparatus according to claim 1, wherein the external memory unit is a dynamic random access memory (DRAM). [(DRAM) column 4, lines 38-39]

With regard to claim 6, Gutttag et al discloses the data access apparatus according to claim 1, wherein a capacity of the data segment of the external memory



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unit is smaller than a capacity of the external memory unit. [(parameter memory section take up 2KB of 50KB of total memory) column 10, lines 50-55]

Claim 8 rejected with same rationale as claim 1.

Claims 9, 17 rejected with same rationale as claim 2.

Claims 10, 19 rejected with same rationale as claim 3.

Claim 12 rejected with same rationale as claim 5.

Claim 13 rejected with same rationale as claim 6.

Claim 15 rejected with same rationale as claims 1 & 3.

***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claim 7, 14, 20 rejected under 35 U.S.C 103 (a) as being unpatentable over Guttag et al (US 5,493,646) as applied to claims 1, 8 and 15 above and in view of Ripley et al (US 2002/0087814).

As per claim 7, Guttag et al does not disclose expressly the data access apparatus according to claim 1, wherein the data access apparatus could be applied to an optical-electronic system and which is selected from: a CD-ROM, CD-RW, DVD+/-ROM, DVD+/-RW. However, Ripley et al discloses CD-ROMs (section 0020), CD-RWs (section 0026), DVD-ROMs and DVD-RWs (section 0066).

Guttag et al and Ripley et al are analogous art because they are from same filed of endeavor, namely accessing data. At the time of the invention it would have been obvious to a person of ordinary skill in the art to incorporate the different types of storage mediums of Ripley et al into the system of Guttag et al. The motivation for doing so would have been provide greater versatility for storage. (Ripley et al; page 1, section 0001)

Claims 14, 20 rejected with same rationale as claim 7.

14. Claims 4, 11, 18 rejected under 35 U.S.C 103 (a) as being unpatentable over Guttag et al (US 5,493,646) as applied to claims 3, 10 and 15 above and in view of Wise et al (US 5,036,494).

As per claim 4, Guttag et al does not disclose expressly the data access apparatus according to claim 3, wherein duration between suspending and reviving the first time cycles is substantial a time when the second time cycles is finished, that is to say when the external memory unit finishes a current task. However, Wise et al discloses a duration of more than one clock cycle. (column 2, lines 28-30)

Guttag et al and Wise et al are analogous art because they are from the same field of endeavor, namely accessing memory. At the time of the invention it would have been obvious to a person of ordinary skill in the art to incorporate the duration of Wise et al into the system of Guttag et al. The motivation for doing so would have been to provide an improved line delay device. (Wise et al; column 1, lines 55-60)

Claims 11, 18 rejected with same rationale as claim 4.

### ***Conclusion***

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Simpson et al	6,185,629
Gove et al	5,651,127
Balmer et al	5,524,265
Guttag et al	5,487,146

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16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Masdon whose telephone number is (571)272-6815. The examiner can normally be reached on Monday - Friday, 7am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan can be reached on (571)272-4210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DM

  
MANO PADMANABHAN  
SUPERVISORY PATENT EXAMINER 3/31/06